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Electrorheological fluids containing polar solids and organic semiconductors

Abstract:

An electrorheological fluid of a particulate phase and a continuous phase of a hydrophobic liquid medium, a certain dispersed particulate phase, and a low molecular weight polar material exhibits a broad effective temperature range. The dispersed particulate phase comprises a polar solid material which is capable of exhibiting substantial electrorheological activity only in the presence of a low molecular weight polar material, and an organic semiconductor. The weight ratio of the polar solid material to the organic semiconductor is at least about 2:1.

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(54) **Electrorheological fluids containing polar solids and organic semiconductors**

(57) An electrorheological fluid of a particulate phase and a continuous phase of a hydrophobic liquid medium, a certain dispersed particulate phase, and a low molecular weight polar material exhibits a broad effective temperature range. The dispersed particulate

phase comprises a polar solid material which is capable of exhibiting substantial electrorheological activity only in the presence of a low molecular weight polar material, and an organic semiconductor. The weight ratio of the polar solid material to the organic semiconductor is at least about 2:1.



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EUROPEAN SEARCH REPORT

Application Number
EP 95 30 5782

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	EP-A-0 311 984 (AMERICAN CYANAMID CO) 19 April 1989 * claims 1-21 * * page 2, line 50 - line 52 * * page 3, line 41 - page 4, line 1 * ---	1-15	C10M171/00
X	DE-A-41 31 142 (BAYER AG) 25 March 1993 * page 2, line 38 - page 5, line 49 * ---	1-15	
X	EP-A-0 201 827 (BAYER AG ; METZELER KAUSCHUK (DE)) 20 November 1986 * page 3 - page 4; claims 1-5 * ---	1-15	
X,D	PATENT ABSTRACTS OF JAPAN vol. 017, no. 704 (C-1146), 22 December 1993 & JP-A-05 239482 (NORIYUKI KURAMOTO), 17 September 1993, * abstract * ---	1-15	
X	PATENT ABSTRACTS OF JAPAN vol. 017, no. 108 (C-1032), 5 March 1993 & JP-A-04 296394 (TOYOTA CENTRAL RES & DEV LAB INC), 20 October 1992, * abstract * ---	1-15	TECHNICAL FIELDS SEARCHED (Int.Cl.6) C10M
X,D	WO-A-93 07244 (LUBRIZOL CORP) 15 April 1993 * page 18, line 5-30; claims 1-53 * * page 32 - page 33 * -----	1-4,6-15	
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 26 June 1996	Examiner Kiliaan, S
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document I : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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